

CHARLIE BAKER
Governor



KARYN POLITO
Lt. Governor

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CONTACT
William Pitman
william.pitman@state.ma.us



Massachusetts Selected to Partner in Biopharmaceutical Manufacturing Innovation

Public-private partnership will develop and commercialize new advanced manufacturing technologies, and train a skilled workforce

BOSTON - Today the Baker-Polito Administration is pleased to announce that Massachusetts will be a partner in the nation's first manufacturing innovation institute in biopharmaceutical manufacturing. The biopharmaceutical manufacturing innovation institute is the sixth Manufacturing USA project secured under the Baker-Polito Administration.

The \$250 million biopharmaceutical innovation institute is a national public-private partnership, awarded through Manufacturing USA, a federally-authorized network of manufacturing innovation institutes. Federal matching funds for the manufacturing innovation institute will be provided by the US Department of Commerce's National Institute of Standards and Technology. The University of Delaware convened this Manufacturing USA team.

Massachusetts will anchor the northeastern node for the biopharmaceutical manufacturing project, which will be known as the National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL). The NIIMBL project will be led regionally by a consortium of small, medium, and large biopharmaceutical industry partners from across the supply chain, along with the Massachusetts Institute of Technology (MIT), Quincy College, UMass Lowell, UMass Medical School, and the Worcester Polytechnic Institute (WPI).

The Commonwealth is supporting NIIMBL's collaborative research and development, and workforce training efforts, through a five-year, \$20 million commitment from the Massachusetts Life Sciences Center (MLSC). The Commonwealth's matching contribution leverages \$70 million in federal funds, awarded to the national project, and additional matching funds from private sector participants.

"Massachusetts leads the nation in the development and deployment of advanced manufacturing technologies, and this new biopharmaceutical manufacturing innovation institute will ensure that our globally competitive life sciences cluster continues to deliver cutting-edge therapies, while providing quality manufacturing jobs to the citizens of Massachusetts," **said Governor Charlie Baker**. "NIIMBL continues our administration's substantial investment in public-private research partnerships that open new advanced manufacturing pathways for workers across Massachusetts. We look forward to collaborating with our partners in the federal government, academia, and the private sector, as we continue to build a foundation for dynamic economic growth."

"Our administration is harnessing advanced manufacturing and workforce development to build prosperity across Massachusetts, and NIIMBL advances these efforts in meaningful ways," **said Lieutenant Governor Karyn Polito**. "By strengthening the ties between academic research institutions, commercial biopharmaceutical research and development efforts, and the manufacturing community, we will create new capacity to manufacture modern biopharmaceutical therapies in Massachusetts, and continue to broaden the reach of the life sciences cluster throughout the Commonwealth."

A shift in the delivery of medical treatments, from powder-based medicines based on chemistry and manufactured in large batches, to biologics, cell therapies, and gene therapies, presents new challenges for the manufacturing of biopharmaceutical treatments at scale. The National Institute for Innovation in Manufacturing Biopharmaceuticals is a public-private partnership that seeks to solve challenges related to the production, testing, and regulation of new treatments.

NIIMBL is a process innovation effort that aims to reduce the risks associated with manufacturing new therapies, improve efficiency in order to deliver new therapies to patients more quickly and at lower cost, and increase the quality and safety of new biopharmaceutical products.

The project will also train an advanced manufacturing workforce, capable of working in new biopharmaceutical manufacturing technologies.

"Being selected as the Northeast node for the National Institute for Innovation in

Biopharmaceutical Manufacturing, and the federal funding that comes with it, will further strengthen Massachusetts's position as the world's leading ecosystem for drug development, from discovery, right through to commercialization and fabrication," **said Travis McCready, President and CEO of the Massachusetts Life Sciences Center.** "This Institute will build connections between our biomanufacturing innovators in industry and academia, and will connect the innovation going on in manufacturing with the innovation going on in the lab. This will translate into technical innovations to improve the biomanufacturing process, allowing for new drugs to reach and help patients more efficiently, and at lower cost."

"Biopharmaceutical manufacturing innovation at MIT and in our region is reflected by the many small and large companies -- and talented faculty and students --- that have come out of such research," **said MIT Provost Martin Schmidt.** "Those companies have settled in Massachusetts to be part of the growing innovation ecosystem anchored in Kendall Square but linked to vibrant regions across the entire Commonwealth. MIT looks forward to continuing to be a strong partner in NIIMBL's national efforts to de-risk manufacturing technologies for new biologic therapies, and to educate and train the future workforce of these companies."

"The University of Massachusetts is proud to leverage the Massachusetts BioManufacturing Center (MBMC) at Lowell and MassBiologics in Boston and Fall River as part of the NIIMBL effort," **said UMass President Marty Meehan.** "UMass has years of experience assisting biotechnology companies in developing cGMP compliant manufacturing processes and in producing FDA-licensed therapeutics, offering solutions that improve productivity, quality and cost. NIIMBL reflects our commitment to expand these public-private partnerships that contribute to the research, innovation, economic development and workforce development needs of the Commonwealth."

"WPI was founded more than 150 years ago to support education and workforce development during the industrial revolution, and we look forward to driving innovation, career development, and other techniques to support 21st century biopharmaceutical manufacturing initiatives," **said WPI President Laurie Leshin.** "For the past decade, WPI has been home to three bioscience facilities that are instrumental to education and innovation in biomanufacturing. We are committed to making those facilities -- the Life Science and Bioengineering Center, the Bioprocess Lab, and the Biomanufacturing Education and Training Center -- indispensable resources for organizations seeking competitive advantages in a global manufacturing economy."

"Quincy College is proud to comprehensively teach the laboratory and critical thinking skills necessary to enter the growing biomanufacturing industry in

Massachusetts and beyond,” said **Bruce Van Dyke, Chair of the Biotechnology and Compliance Program at Quincy College**. “Through lectures, seminars, and over 450 hours of hands-on laboratory experience, students earn an Associate of Science or Certificate in Biotechnology and Good Manufacturing Practice, and are fully trained to begin working in the biomanufacturing industry at entry-level positions. As a partner in the NIIMBL Project, our role would be to train individuals to fill biopharmaceutical manufacturing positions in the local workforce.”

Manufacturing USA, formerly known as the National Network for Manufacturing Institutes, is a network of competitively awarded public-private innovation institutes. Manufacturing USA seeks to spur research into cutting-edge technologies that can be applied to advanced manufacturing processes. Bidders frequently form teams of universities across different states, with regional nodes supporting the lead bidder. The federal awards are leveraged several times over through a series of state and industry matches.

Massachusetts is convening a national effort to develop revolutionary fibers and textiles, and the state is a participant in regional manufacturing innovation institute nodes in photonics, flexible hybrid electronics, smart manufacturing, and rapid process intensification.

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